

REMARKS

This Application has been carefully reviewed in light of the Office Action mailed May 19, 2008. At the time of the Office Action, Claims 64-96 were pending in this Application. Claims 64-70, 74-85 and 89-96 were rejected. Claims 64, 67, 79 and 82 have been amended. New Claims 97 and 98 have been added. Claims 71-73 and 86-88 have been withdrawn due to an election/restriction requirement. Applicant respectfully requests reconsideration and favorable action in this case.

Double Patenting Rejection

The Examiner has provisionally rejected Claims 64-70, 74-85 and 89-96 based on the judicially created double patenting doctrine over Claims 14-21 and 23-26 of co-pending Application 11/686,169 (hereinafter '169 application) stating that the subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter.

The Examiner has provisionally rejected Claims 64-70, 74-85 and 89-96 based on the judicially created double patenting doctrine over Claims 28-52 of co-pending Application 12/048,961 (hereinafter '961 application) stating that the subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter.

The Examiner has provisionally rejected Claims 64-70, 74-85 and 89-96 based on the judicially created double patenting doctrine over Claims 1-11 and 24 of co-pending Application 11/774,985 (hereinafter '985 application) stating that the subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter.

Applicant respectfully traverses the rejection. However, to reduce the cost and time required to obtain patent protection, three Terminal Disclaimers filed in compliance with 37 C.F.R. 1.321 are attached hereto. The Terminal Disclaimers are offered in the event the Examiner converts the provisional rejection to a rejection based on non-statutory double

patenting grounds. The '169, '961 and '985 applications and the instant patent application are commonly owned by Sierra Molecular Corporation.

Rejections under 35 U.S.C. § 112

A. 35 U.S.C. §112, Second Paragraph

Claims 65, 68-69, 80 and 83-84 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for allegedly lacking proper antecedent basis for the term "the divalent metal chelator." Applicant respectfully traverses. Claims 64, 67, 79 and 82, as amended herein, recite "a divalent metal chelator." Since Claims 65, 68-69, 80 and 83-84 are dependent on Claims 64, 67, 79 and 82, Applicant respectfully requests withdrawal of this rejection.

B. 35 U.S.C. §112, First Paragraph

Claims 64-70, 74-85 and 89-96 have been rejected by the Examiner under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the enablement requirement. Applicants respectfully traverse. Claims 64, 67, 79 and 82, as amended herein, recite "a divalent metal chelator." The specification fully enables the practice of divalent metal chelators, for example, at Page 3, lines 15-19, Page 6, lines 11-21, and Examples 1 and 2. Accordingly, the enablement rejection for allegedly lacking support for "methods employing any kind of chelator" are moot.

Page 4 of the Office Action alleges that the Specification "does not reasonably provide enablement for methods in which the chelator enhancing component is sodium salicylate." Applicants respectfully traverse. The Specification more than adequately describes the use of sodium salicylate. For example, the Specification on page 3, lines 15-19, recites:

The masking agents that are present in a nucleic acid-containing test sample are suppressed by contacting the test sample with an amount of one or more divalent metal chelators like ethylenediaminetetraacetic acid or 1,2-bis(2-aminophenoxy)ethane-N,N,N',N'-tetraacetic acid, or salts thereof; and an amount of one or more chelator enhancing components like lithium chloride, guanidine, or **sodium salicylate**.

(**emphasis added**). In addition, the Specification on page 4, lines 6-10, recites:

A further aspect of the invention relates to methods of improving hybridization of nucleic acids, including contacting a test nucleic acid with a

reagent comprising an amount of at least one divalent metal chelator, e.g., in the range of from about 0.001M to 0.1M; and an amount of at least one chelator enhancing component, e.g., lithium chloride, guanidine, **sodium salicylate**, sodium perchlorate, or sodium thiocyanate....

(emphasis added). Furthermore, the Specification on page 6, lines 29-30, recites:

Lithium chloride, guanidine, **sodium salicylate**, sodium perchlorate, and sodium thiocyanate have been found to be particularly effective.

(emphasis added). It is evident from the above, that the Specification more than adequately describes sodium salicylate as a chelator enhancing component and enables its use.

Therefore, since the specification fully supports divalent metal chelators and a sodium salicylate chelator enhancing component, Applicant respectfully requests withdrawal of the instant enablement rejection.

Rejections under 35 U.S.C. § 102

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, “the identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co. Ltd.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Applicant respectfully submits that the art cited as anticipatory by the Examiner cannot anticipate the rejected Claims, because the cited art does not show all the elements of the present Claims.

A. Claims 64-70, 75 and 77-78

Claims 64-70, 75 and 77-78 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,514,551 issued to Yeasing Yang *et al.* (“Yang”) Applicant respectfully traverses and submits the cited art does not teach all of the elements of the presently claimed embodiments.

The Action has cited *Yang* and alleged that there is no “manipulative difference between the claimed invention and that of *Yang et al.*, but rather recites a result that inherently occurs as a result of the contacting step.” The Action also alleges that the teachings of *Yang* “establish that it is an inherent feature of *C. trachomatis* containing samples that they include the leukocyte esterase as in Example 2.”

Applicants respectfully note that inherency is not established merely by showing that a result *may* be achieved. MPEP § 2112(IV). “To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *In re Robertson*, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999). Rather, the result must *necessarily* flow from the teaching of the cited reference. MPEP § 2112(IV); *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). Applicant submits that the Action has not met its burden-of-proof as it must provide rationale or evidence tending to show inherency. See MPEP § 2112(IV).

The Office Action has failed to meet its burden-of-proof as it provides no rationale or evidence to show inherency of the claimed embodiments in *Yang*. Furthermore, *Yang* fails to teach “methods of suppression of masking agents” and/or “storing the nucleic acid-containing sample at a temperature of from about 4°C to about 37°C and for a time of up to about 7 days” as recited by the present independent Claims 64, 67, 79, and 82. Absent these elements, *Yang* cannot anticipate the present claims.

In addition, the Action has provided no reason or rationale why a masking agent may be present in *Yang*’s sample. Applicants note that Example 2 of *Yang*, cited by the Action, provides no teaching of leukocyte esterase or any other masking agent and at the best describes samples of “differing amounts of purified *C. trachomatis* rRNA” used to test sensitivity of its detection methods. The Action has provided no reason or rationale how/why a “purified *C. trachomatis* rRNA” sample may contain a masking agent. Therefore, the Office Action has failed to meet its burden-of-proof to show the alleged inherency.

In view of the foregoing, Applicant submits that *Yang* cannot anticipate the instant claims and requests withdrawal of the 35 U.S.C. §102(b) rejections to Claims 64-70, 75 and 77-78.

B. Claims 64-70, 74-76, 79-85, 89 and 93-94

Claims 64-70, 74-76, 79-85, 89 and 93-94 stand rejected under 35 U.S.C. §102(b) as being anticipated by “*An Improved Method for Isolating High Quality Polysaccharide-free RNA from Tenacious Plant Tissues*,” by Chung Han Chung *et al.* (“*Chung*”). Applicant

respectfully traverses and submits the cited art does not teach all of the elements of the claimed embodiment of the invention.

According to the Office Action, *Chung* describes improved methods for isolating RNA from plant tissues using an Extraction Buffer A that comprises LiCl and EDTA among other components. The Action alleges that “*Chung et al.* therefore disclose a contacting step meeting the requirements of the instant claims” and with regard to the “intended use of suppressing the interference of leukocyte esterase” there is no “manipulative difference between the claimed method and that of *Chung et al.*”

Applicant respectfully traverses and notes that that inherency is not established merely by showing that a result *may* be achieved. MPEP § 2112(IV); *In re Robertson*, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999). Rather, the result must *necessarily* flow from the teaching of the cited reference. MPEP § 2112(IV); *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). The requirements for establishing inherency have been outlined in detail in the section above and Applicant submits that the Action has not met its burden to establish inherency as it must provide rationale or evidence tending to show inherency. See MPEP § 2112(IV). The Office Action has failed, therefore, to meet its burden to show how the “contacting step” of *Chung* “meets the requirements of the instant claims;” or how/why it is inherent in *Chung* that to suppress “the interference of leukocyte esterase;” or how/why there is no “manipulative difference between the claimed method and that of *Chung*.”

In addition, *Chung* fails to teach methods for “suppression of interference of a masking agent” as recited by the present independent Claims 64, 67, 79, and 82. *Chung* also fails to teach “storing the nucleic acid-containing sample at a temperature of from about 4°C to about 37°C and for a time of up to about 7 days” as recited by the present independent Claims 64, 67, 79, and 82. At best *Chung* provides an “RNA extraction buffer (Buffer A) that is effective to obtain high-quality RNA from oilseeds,” rather than other plant tissues. In view of the foregoing, Applicant requests withdrawal of the 35 U.S.C. §102(b) rejections to Claims 64-70, 74-76, 79-85, 89 and 93-94.

Rejections under 35 U.S.C. §103

Claims 77-78 and 95-96 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Chung* in view of *Yang*. Applicant respectfully traverses and submits the cited art

combinations, even if proper, which Applicant does not concede, does not render the claimed embodiment of the invention obvious.

In order to establish a *prima facie* case of obviousness, the references cited by the Examiner must disclose all claimed limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). Even if each limitation is disclosed in a combination of references, however, a claim composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR Int'l. Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007). Rather, the Examiner must identify an apparent reason to combine the known elements in the fashion claimed. *Id.* “Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.*, citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Finally, the reason must be free of the distortion caused by hindsight bias and may not rely on ex post reasoning. *KSR*, 127 S.Ct. at 1742. In addition, evidence that such a combination was uniquely challenging or difficult tends to show that a claim was not obvious. *Leapfrog Enterprises, Inc. v. Fisher-Price, Inc. and Mattel, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007), citing *KSR*, 127 S.Ct. at 1741.

The failure of the present Office Action to satisfy its burden in establishing inherency of the claimed embodiments with regard to *Chung* and *Yang* are outlined above. Applicant submits that the Action has not met its burden because it must provide a rationale or evidence supporting the alleged inherency. *See* MPEP § 2112(IV).

In addition, *Chung* and/or *Yang* both fail to teach, disclose or suggest methods for “suppressing the interference of a masking agent” such as leukocyte esterase, myoglobins, hemoglobins, bilirubin, which are common in samples derived from blood, urine, and other body fluid as described in the present specification and as recited by the present independent Claims 64, 67, 79, and 82. *Chung* and/or *Yang* also fails to teach “storing the nucleic acid-containing sample at a temperature of from about 4°C to about 37°C and for a time of up to about 7 days” as recited by the present independent Claims 64, 67, 79, and 82. Absent the teaching, suggestion or motivation of these elements of the claimed embodiments by either *Chung* or *Yang*, alone or in combination, Applicant submits that the 35 U.S.C. §103(a) rejections to Claims 77-78 and 95-96 are moot and request withdrawal of the same.

New Claims 97 and 98

New Claims 97 and 98 have been added. Support for these Claims can be found in the Specification at least at pages 3-6, 10-19. No new matter is introduced by these new Claims. Applicants request consideration of the Claims 97 and 98.

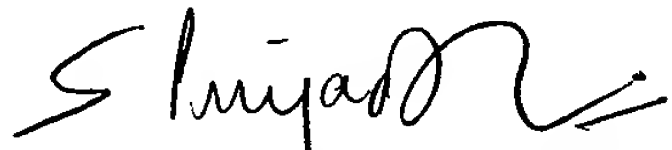
CONCLUSION

Applicant has made an earnest effort to place this case in condition for allowance in light of the amendments and remarks set forth above. Applicant respectfully requests reconsideration of the pending claims.

Applicant believes there are no fees due at this time, however, the Commissioner is hereby authorized to charge any fees necessary or credit any overpayment to Deposit Account No. 50-2148 of Baker Botts L.L.P.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicant's agent at 512.322.2631 or Applicant's attorney, Guy F. Birkenmeier, at 512.322.2647.

Respectfully submitted,
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Enclosures: 1) 3 Terminal Disclaimers and Statement of Assignees